AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for enhancing the capacity of a cellular radio-communication system, a cell of said radio-communication system comprising a base station and end-users able to communicate with said base station by using a first modulation type over a first channel, said cell experiencing an interference level from distant end-users communicating with at least one distant base station by using said first communication channel, said method ~~being characterised in that end-users located in~~ comprising:

determining size and location of at least one domain in said cell based on antenna directivity of said distant end-users and on relative positions of said at least one distant base station and said base station; and

assigning a second modulation type to said at least one domain of said cell in which said interference level is lower than a predefined interference level,

wherein end-users located in said domain communicate with said base station ~~by~~ using ~~a~~ said second modulation type over a second communication channel, said second modulation type having a higher efficiency than said first modulation type~~, the size and location of said domains in said cell depending on the antenna directivity of said distant end-users and on the relative positions of said distant base stations and said base station~~.

2. (currently amended): A method according to claim 1, ~~characterised in that~~ wherein said end-users are fixed terminals ~~configured~~, said method further comprising configuring said end-users to use only said second modulation type if ~~they~~ said end-users are located in said ~~domains~~ at least one domain in which said interference level is lower than said predefined interference level and configuring said end-users to use only said first modulation type if said end-users are not located in said at least one domain.

3. (currently amended): A method according to claim 1, ~~characterised in that~~ wherein said end-users are mobile terminals able to switch between said first modulation type and said second modulation type ~~depending on the domain they are moving to~~, said method further comprising configuring said end-users to use only said second modulation type if said end-users are located in said at least one domain in which said interference level is lower than said predefined interference level and configuring said end-users to use only said first modulation type if said end-users are not located in said at least one domain.

4. (previously presented): A method according to one of the claim 1, characterised in that, said first modulation type is 4 QAM and said second modulation type is 16QAM.

5. (previously presented): A method according to one of the claim 1, characterised in that said first and second communication channels are channels of a frequency and/or time and/or code division multiplex scheme.

6. (currently amended): A cellular radio-communication system~~, each~~ comprising:

at least one cell ~~of which~~ comprising at least one domain having an assigned modulation type;

a base station ~~and~~, wherein end-users ~~able to~~ communicate with said base station by using a first modulation type over a first communication channel~~,~~; and

at least one distant base station, said cell experiencing an interference level from distant end-users communicating with said at least one distant base station by using said first communication channel, ~~said system being characterised in that~~

wherein, when said end-users are located in said at least one domain of said cell ~~in which~~ and said interference level is lower than a predefined interference level, said assigned modulation type is a second modulation type and said end-users communicate with said base station by using ~~a~~ said second modulation type over a second communication channel, said second modulation type having a higher efficiency than said first modulation type, ~~the~~ and

wherein size and location of said ~~domains in said cell depending~~ at least one domain is defined based on ~~the~~ antenna directivity of said distant end-users and on ~~the~~ relative positions of said at least one distant base ~~stations~~ station and said base station.